

In the Claims:

1. (Currently Amended) A method for determining imaging errors of an optical system in [[the]] a production of a mask for semiconductor component fabrication, the method comprising:

measuring optical properties of a structure of the mask using a measuring system,
the measuring system comprising illumination and detector systems;

automatically selecting a stored correction data record from a correction database in a manner dependent on at least one parameter that characterizes the mask, the correction data record including information related to errors in the measuring system arising from the illumination and the detector systems;

combining measurement results associated with the measured optical properties with the correction data record to produce a corrected measurement result; and

storing a measurement data record with the corrected measurement result in a database system.

2. (Currently Amended) The method according to Claim 1, wherein the at least one parameter that characterizes the mask is [[the]] a wavelength at which the mask is used in a photolithography method.

3. (Currently Amended) The method according to Claim 1, wherein the at least one parameter that characterizes the mask is a substance property of the mask.

4. (Currently Amended) The method according to Claim 1, wherein the correction data record includes information for [[the]] correction of inhomogeneities of a radiation source of the illumination system of the measuring system.
5. (Previously Presented) The method according to Claim 14, wherein the optical element comprises a lens.
6. (Currently Amended) The method according to Claim 1, wherein the at least one parameter that characterizes the mask comprises an identification mechanism.
7. (Previously Presented) The method according to Claim 6, wherein the identification mechanism comprises a bar code.
8. (Currently Amended) The method according to Claim 1, wherein measuring the optical properties comprises measuring at least one of CD values and/or positional errors.
9. (Currently Amended) A device for determining imaging errors of an optical system in [[the]] a production of a mask for semiconductor component fabrication, the device comprising:
 - a measuring system for determining optically measurable properties of the mask;
 - a correction database with at least one stored correction data record~~[[,]]~~;
 - a data processor for automatically selecting ~~[[a]]~~ the at least one correction data record from the correction database in a manner dependent on at least one parameter that

characterizes the mask, the selected correction data record including information related to errors in [[the]] illumination and detector systems of the measuring system[[,]];

~~a measuring system for determining optically measurable properties of the mask,~~
means for combining measurement results of the optically measurable properties of the mask with the correction data record associated with the mask to produce a corrected measurement result~~[[,]]~~; and

means for generating a measurement data record with the corrected measurement result in a database system.

10. (Previously Presented) The device according to Claim 9, wherein said measuring system includes means for measuring CD dimensions and/or positional errors of one of a CoG mask and a phase shift mask.

11. (Original) The device according to Claim 9, wherein the mask is designed for wavelengths of 365nm, 193nm or 157nm.

12. (Currently Amended) A method for determining imaging errors of an optical system in [[the]] a production of a mask for semiconductor component fabrication, the method comprising:

measuring optical properties of a structure of the mask using a measuring system;
detecting at least one parameter for the characterization of the mask;
automatically selecting a stored correction data record from a correction database in a manner dependent on the at least one parameter that characterizes the mask, wherein

the correction data record includes information for ~~[[the]]~~ correction of inhomogeneities of an illumination system;

combining measurement results associated with the measured optical properties with the correction data record associated with the mask in a data processing device to produce a corrected measurement result; and

storing a measurement data record with the corrected measurement result in a database system.

13. (Currently Amended) A device for determining imaging errors of an optical system in ~~[[the]]~~ a production of a mask for semiconductor component fabrication, the device comprising:

means for detecting at least one parameter that characterizes the mask;

a correction database with at least one stored correction data record, wherein the correction data record includes information for ~~[[the]]~~ correction of inhomogeneities of an illumination system;

data processing means for automatically selecting ~~[[a]]~~ the correction data record from the correction database in a manner dependent on the at least one parameter that characterizes the mask;

a measuring system for determining optically measurable properties of the mask;

means for combining measurement results of the optically measurable properties of the mask with the correction data record associated with the mask to produce a corrected measurement result; and

means for generating a measurement data record with the corrected measurement result in a database system.

14. (Currently Amended) The method according to Claim 4, wherein the correction data record further includes information for [[the]] correction of inhomogeneities of at least one of an associated CCD chip and an optical element.

15. (Previously Presented) The method according to Claim 1, further comprising detecting the at least one parameter that characterizes the mask.

16. (Previously Presented) The method according to Claim 1, wherein the measurement results associated with the measured optical properties and the correction data record are combined in a data processing device.

17. (New) A method for determining imaging errors of an optical system in a production of a mask for semiconductor component fabrication, the method comprising:
 exposing a mask by projecting light from an illuminator, the projected light comprising a first error;
 measuring a measurement result of the projected light exposed through the mask using a detector system, the detector system adding a second error to the measurement result;

automatically selecting a stored correction data record from a correction database in a manner dependent on at least one parameter that characterizes the mask, the correction data record including information related to the first and the second errors;

correcting the measurement result by removing the first and the second errors from the measurement result by combining the measurement results with the correction data record; and

storing a measurement data record with the corrected measurement result in a database system.